Laboratory of Biomolecular Structures

HEAD:

Prof. Paweł Krysiński*, PhD DSc

GROUP MEMBERS:

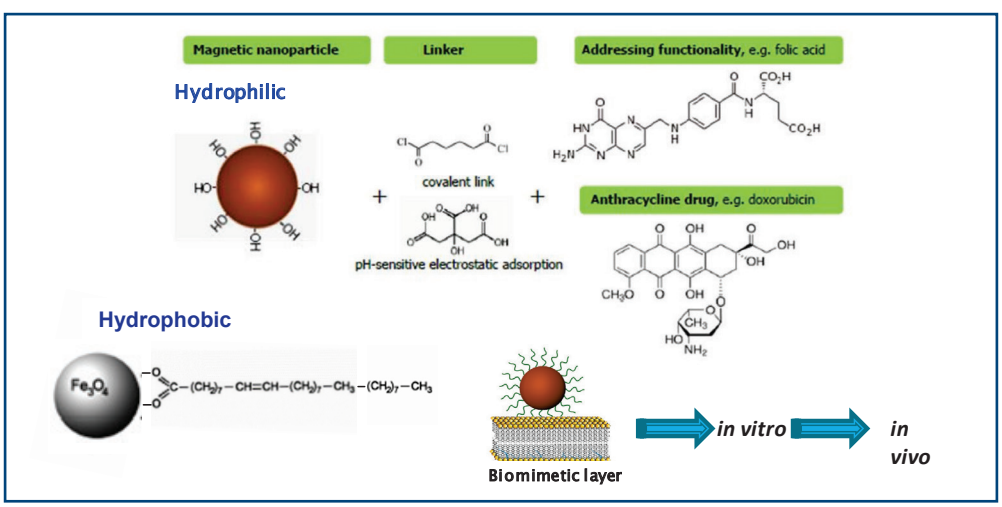
Dorota Nieciecka, PhD;
Magdalena Osial, PhD
PhD student: Aleksandra Rękorajska

RESEARCH PROFILE:

Electrochemistry and spectroscopy of magnetic nanoparticle interactions with organized biomimetic systems.

CURRENT RESEARCH ACTIVITIES:

Synthesis of magnetic nanoparticles NP) for drug delivery; electrochemical analysis of their interactions with biomimetic membranes; Langmuir and Langmuir-Blodgett layers; core and surface tailoring of NPs for multitasking purposes. Magnetothermal effect of hybrid nanostructures.



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SELECTED PUBLICATIONS:

1. M. Osial, P. Rybicka, M. Pękała, G. Cichowicz, M. Cyrański, P. Krysiński, Easy Synthesis and Characterization of Holmium-Doped SPIONs, Nanomaterials. 8 (2018) 430.
2. A. Rękorajska, G. Cichowicz, M. Cyrański, M. Grdeń, M. Pękała, G.J. Blanchard, Synthesis and Characterization of Tb-Doped Nanoferrites, ChemNanoMat. 4 (2018) 231-242.
3. M. Szlęzak, D. Nieciecka, A. Joniec, M. Pękała, E. Górecka, M. Emo, M.J. Stebe, P. Krysiński, R. Bilewicz, Monoolein Cubic Phase Gels and Cubosomes Doped with Magnetic Nanoparticles-Hybrid Materials for Controlled Drug Release, ACS Applied Mat.& Interf. 9 (2017) 2796-2805.
4. A. Joniec, S. Sęk, P. Krysiński, Magnetoliposomes as Potential Carries of Doxorubicin to Tumours, Chem.-A Europ.J. 22 (2016) 17715-17724.
5. D. Nieciecka, A. Królikowska, K. Kijewska, G.J. Blanchard, Hydrophilic iron oxide nanoparticles probe the organization of biomimetic layers: electrochemical and spectroscopic evidence, Electrochim. Acta. 209 (2016) 671-681.